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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,202	02/20/2002	Zaher A. Samman	US020048	9268

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EXAMINER	
NATNAEL, PAULOS M	
ART UNIT	**PAPER NUMBER**
2622	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/080,202	SAMMAN ET AL.	
	Examiner	Art Unit	
	Paulos M. Natnael	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 9-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *2,4 and 9-14* is/are allowed.

6)☒ Claim(s) *1,3 and 15-19* is/are rejected.

7)☒ Claim(s) *20-22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Kawashima et al., U.S. Pat. No. 5,898,465.

Considering claim **15**, Kawashima discloses a projection television system 200 comprising a display 60, projections 82,84,86, photosensors 66,64,68,70, adjustable pattern generator 110 (which generates first and second test patterns which test pattern is displayed on the display), a controller 76 that receives signals output by the sensors, which is combined by I/V converter 72. The latter generates voltage signals which are converted to digital signals by the A/D converter and transmitted to the controller 76. The controller provides control signals to diffraction wave generator which in turn drives the deflection yoke driver 80 that outputs deflection control signals which is applied to the CRT deflection yokes.

3. Claims **15-19** are rejected under 35 U.S.C. 102(e) as being anticipated by George, U.S. 6,606,130.

Considering claim **15**, George discloses the screen 700, CRTs RG and B, Deflection Amplifiers 600 and 650, and sensors S1-S8, respectively. (fig.2) Control Logic 301 receives the sensor data from the detector 275 which detects the signals received from the sensors S1-S8 and sends command to the deflection amplifiers through the bus 951, controlling the amplitude and wave shape of the deflection signals. (col. 2, lines 48-65 and col. 3, lines 14-32) Furthermore, George discloses on col. 2, lines 48-65 that "The horizontal deflection coil sets are driven by a horizontal deflection amplifier 600 and vertical deflection coil sets are driven by a vertical deflection amplifier 650. Both horizontal and vertical deflection amplifiers are driven with deflection waveform signals that are controlled in amplitude and waveshape via data bus 951 and synchronized with the signal source selected for display. Exemplary green channel horizontal and vertical convergence coils 615 and 665 respectively, are driven by amplifiers 610 and 660 respectively, which are supplied with convergence correction waveform signals. The correction waveform signals GHC and GVC may be considered representative of DC and AC convergence signals, for example static and dynamic convergence. However, these functional attributes may be facilitated, for example by *modifying all measurement location addresses* by the same value or offset *to move the complete raster* and achieve an apparent static convergence or *centering effect.*" (col. 2, 48-65)

As to claims **16-19**, see the rejection of claim 15 and disclosure on col. 2, lines 48-65.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims **1** and **3** are rejected under 35 U.S.C. 103(a) as being unpatentable over George, U.S. Pat. No. 6,606,130.

Considering claims **1** and **3**, George discloses a test pattern displayed on Fig.1, sensors S1-S8, the test pattern is electronically generated (col. 2, lines 27-35). George teaches "...Thus with these sensor positions it is possible to measure an electronically generated test pattern, for example peak video value block M, to determine picture width and height and certain geometric errors, for example, rotation, bow, trapezium, pincushion etc., and thereby align the displayed images to be superimposed one with the other over the whole of the screen area. Measurements are performed in both horizontal and vertical directions in each of the three projected color images thus yielding at least forty-eight measured values. See col. 2, lines 27-38. Although George does not use the term "combine", it would nonetheless be recognized by the skilled in the art as inherently disclosed and that the said "sensor positions" output by the sensors would be combined, added to each other, mixed, blended or merged and sent to the

logic which generates the "test pattern". George teaches that the "Controllers 900 and 301 also position block M to illuminate exemplary sensor S1 by determining horizontal and vertical timing to position block M within the scanned display raster or by moving the scanned raster, or a part of the scanned raster containing the marker block M." See col. 3, lines 20-25. The correction waveform signals GHC and GVC may be considered representative of DC and AC convergence signals, for example static and dynamic convergence. However, these functional attributes may be facilitated, for example ***by modifying all measurement location addresses by the same value or offset to move the complete raster and achieve an apparent static convergence or centering effect***." (col. 2, 48-65)

As to the combining the signals output by the sensors, since the claim does not specifically claim whether or not by combining it is meant to add #1 and #2 together and take the total as an output. Nevertheless, given a reasonably broad interpretation, the combination of the signals (currents, I) detected by the detector 275 are transmitted to the logic chip 300 and stored in memory and/or used to generate a digital word by the controller in order to drive the amplifiers 610, 660, for example. See col. 4, lines 36 through col. 5, lines 8.

Response to Arguments

6. Applicant's arguments filed 2-25-06 have been fully considered but they are not persuasive.

The applicant argues that George does not teach a) receiving output signals from at least two optical sensors while a test pattern image is displayed, (b) combining the signals to form an adjustment measure, and c) a deflection signal generator that modifies a path of a projection based at least in part on the adjustment measure. George teaches sequentially displaying a small block "M" at the location of each of a plurality of sensors located at the periphery of a display and receiving output signals from each sensor when the block M is at the corresponding location. The applicants respectfully maintain that the movement of the block M from one location to another produces a different image, and thus George cannot be said to display a test pattern image (singular) and receiving output signals from multiple sensors while the same test pattern image is being displayed.

George discloses a projection television apparatus with multiple photo sensors. The output of sensors is detected by detector 275 and a signal is sent to logic 301 which processes the received signal. The logic 301 along with the controller 900 controls the operation of the system. The examiner submits that nowhere does George disclose when Block M moves from one location to another the "image" is changed. The applicant has failed to point out where in the reference says what applicant is alleging here. George discloses generating, electronically, a test pattern, receiving output signals from each sensor. George discloses "with these sensor positions it is

possible to measure an electronically generated test pattern, for example peak video value block M, to determine picture width and height and certain geometric errors...thereby align the displayed images... See col. 2, lines 29-35. As to deflection signal generation, George teaches horizontal and vertical deflection amplifiers. Specifically, George teaches that "Both horizontal and vertical deflection amplifiers are driven with deflection waveform signals that are controlled in amplitude and waveshape via data bus 951 and synchronized with the signal source selected for display. Exemplary green channel horizontal and vertical convergence coils 615 and 665 respectively, are driven by amplifiers 610 and 660 respectively, which are supplied with convergence correction waveform signals. The correction waveform signals GHC and GVC may be considered representative of DC and AC convergence signals, for example static and dynamic convergence. However, these functional attributes may be facilitated, for example by modifying all measurement location addresses by the same value or offset to move the complete raster and achieve an apparent static convergence or centering effect. Similarly, a dynamic convergence effect may be produced by modification of the location address of a specific measurement location. Col. 2, lines 51-67. Thus, the argument that George does not teach "a) receiving output signals from at least two optical sensors while a test pattern image is displayed, (b) combining the signals to form an adjustment measure, and c) a deflection signal generator that modifies a path of a projection based at least in part on the adjustment measure", is unpersuasive.

Allowable Subject Matter

7. Claims **2,4,9-14** are allowable of the prior art.

8. Claims **20-22** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to disclose, a method for adjusting a raster geometry in a rear projection television receiver, comprising the steps of: setting the height and width controls for the raster to respective maximum values; displaying a first test pattern consisting of a raster projection pattern; measuring and storing the maximum output from said optical sensors; displaying a second test pattern consisting of a center adjust pattern; adjusting the centering of the raster based on the outputs of the optical sensors located on the lateral sides of the display screen; displaying the first test pattern; adjusting the width of the raster based on the outputs of the optical sensors located on the lateral sides of the display screen; adjusting the height of the raster based on the outputs of the optical sensors located above and below the display screen; adjusting the linearity of the raster based on the outputs of the optical sensors located above and below the display screen; and re-adjusting the height of the raster based on the outputs of the optical sensors located above and below the display screen, as in claim **9;**

An arrangement for adjusting a raster geometry in a rear projection television receiver, comprising, a controller having an input coupled to receive the digitally converted sensor output signal, a first output coupled to said sensor output selector for selecting one of the sensor output signals, a second output coupled to the video signal processing circuit for causing the video signal processing circuit to process the test pattern from the pattern generator, a third output coupled to the pattern generator for selecting one of the test patterns, and fourth outputs coupled to the control input means of the video signal processing circuit for controlling the centering, height, width and linearity of the raster generated by said one color video signal projector, wherein said controller performs the following functions: sets the height and width controls for the raster to respective maximum values; displays a first test pattern consisting of a raster projection pattern; measures and stores the maximum output from said optical sensors; displays a second test pattern consisting of a center adjust pattern; adjusts the centering of the raster based on the outputs of the optical sensors located on the lateral sides of the display screen; displays the first test pattern; adjusts the width of the raster based on the outputs of the optical sensors located on the lateral sides of the display screen; adjusts the height of the raster based on the outputs of the optical sensors located above and below the display screen; adjusts the linearity of the raster based on the outputs of the optical sensors located above and below the display screen; and re-adjusts the height of the raster based on the outputs of the optical sensors located above and below the display screen, as in claim **14**;

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 9am - 5:30pm M,W, F (7am-3:30pm T,Th).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paulos M. Natnael
Primary Examiner
Art Unit 2622

PMN
May 15, 2006